

Remarks:

Reconsideration of the application, as amended herein, is respectfully requested.

Claims 12 - 21 and 23 are presently pending in the application. Claims 16, 19, 20, 21 and 23 have been amended. Claims 1 - 11 and 22 were previously canceled. As it is believed that the claims were patentable over the cited art in their previously presented form, the claims have not been amended to overcome the references.

In item 2 of the above-identified Office Action, claims 16, 19, 20, 21 and 23 were objected to on the basis of certain informalities. Applicant has amended the claims to address the formalities raised in item 2 of the Office Action.

In item 4 of the Office Action, claims 12 - 21 and 23 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over U. S. Patent No. 6,538,224 to Furuta et al ("**FURUTA**") in view of U. S. Patent No. 6,680,453 to Rokunohe et al ("**ROKUNOHE**").

Applicant respectfully traverses the above rejections.

More particularly, claim 12 recites, among other limitations:

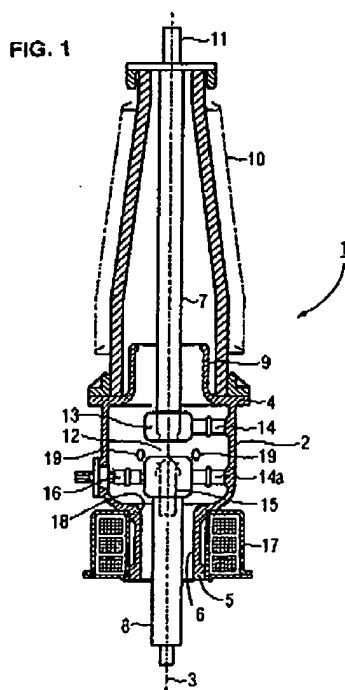
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said first phase conductor passing through said first flange;

. . .

a tubular electrode connected to said housing, concentrically surrounding said first phase conductor, disposed radially inside said first flange, and projecting beyond said first flange. [emphasis added by Applicant]

As such, Applicant's claim 12 requires, among other things, a first phase conductor passing through a first flange, the first phase conductor being concentrically surrounded by a tubular electrode that is disposed radially inside the first flange, and which projects beyond the first flange. Such a tubular electrode is shown as element 9 of Fig. 1 of the instant application, reproduced herebelow for convenience.



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However, the prior art fails to teach, among other limitations of Applicant's claims, Applicant's particularly claimed **tubular electrode, concentrically surrounding a first phase conductor, that is disposed radially inside the first flange, and which projects beyond the first flange,** of claim 12.

More particularly, page 3 of the Office Action acknowledges this failure of **FURUTA**, stating, in part:

Furuta discloses claimed invention [sic] **except for a tubular electrode connected to the housing, concentrically surrounding the first phase conductor** and radially disposed inside the first flange and projecting beyond the first flange. [emphasis added by Applicant]

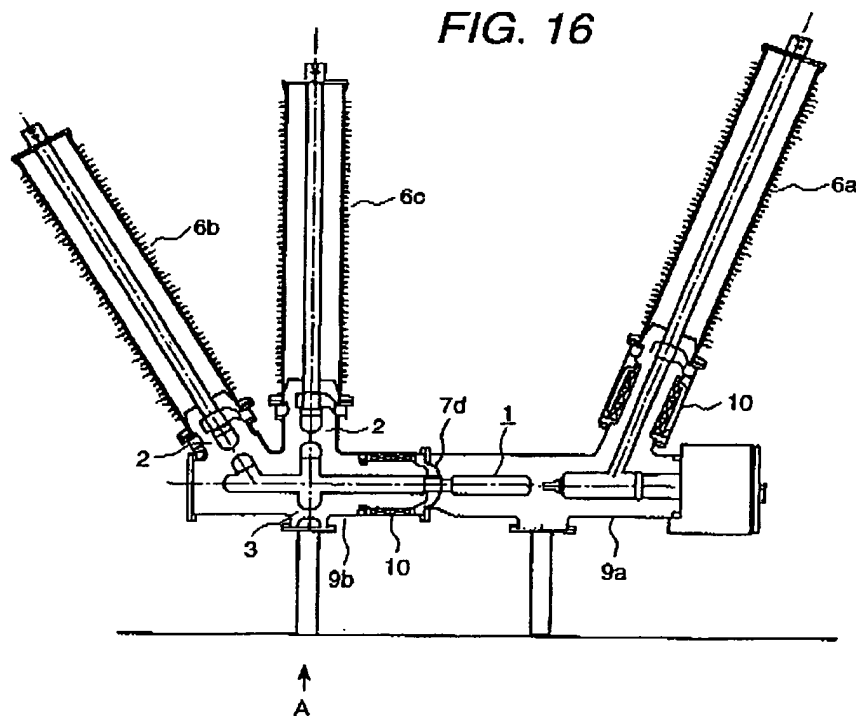
Rather, page 3 of the Office Action points to the **ROKUNOHE** reference as allegedly providing the teachings missing from **FURUTA**. More particularly, page 3 of the Office Action states, in part:

Rokunohe et al., in Figure 16, discloses a disconnecter [2] with a top flange and a tubular electrode [not numbered] connected to the housing, concentrically surrounding the first phase conductor and radially disposed inside the first flange and projecting beyond the first flange.

Applicant respectfully disagrees.

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First, **ROKUNOHE** fails to teach or suggest, among other limitations of Applicant's claims, a tubular electrode connected to the housing, concentrically surrounding the first phase conductor, as required by Applicant's claim 12. To assist with the present discussion, Fig. 16 of **ROKUNOHE** is reproduced, herebelow, for convenience.



The Office Action does not particularly point out what part of the bushings 6a, 6b, 6c of **ROKUNOHE** is alleged to be analogous to Applicant's claimed "tubular electrode". However, inside the lower portion of each of the bushings 6a, 6b and 6c of **ROKUNOHE** appears a line, behind the bus line, which Applicant is assuming is what is being pointed to in the Office Action as the alleged "tubular electrode" of Fig. 16 of **ROKUNOHE**. If

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the Office Action is alleging that this line in Fig. 16 of **ROKUNOHE** is a "tubular electrode", Applicant cannot find any support for this assumption, as **ROKUNOHE** does not contain any explanation for, or description of, the line referenced in the bushings 6a, 6b, 6c of Fig. 16 of **ROKUNOHE**.

In contrast to the assumption made in the Office Action, **Applicant believes that the line denoted in the bottom portion of the bushings 6a, 6b, 6c of Fig. 16 of ROKUNOHE are merely schematic representations.** For example, the line at the bottom of the bushings 6a, 6b, 6c of Fig. 16 of **ROKUNOHE** could merely be showing an offset in the interior of the bushings 6a, 6b, 6c. As such, Applicant believes that Fig. 16 of **ROKUNOHE** does not teach, suggest, motivate or show any electrode concentrically surrounding the bus lines of 6a, 6b, 6c, tubular or otherwise.

There is nothing in the **ROKUNOHE** reference that would lead a person ordinary skill in this art to conclude that the undescribed line in the lower portions of the bushings 6a, 6b, 6c of Fig. 16 of **ROKUNOHE** is a tubular electrode. Rather, the conclusion that **ROKUNOHE** includes a tubular electrode concentrically surrounding the bus lines of bushings 6a, 6b, 6c of **ROKUNOHE** appears to be based on the impermissible hindsight reconstruction of Applicant's claimed invention of

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claim 12. Thus, Applicant believes that the **FURUTA** and **ROKUNOHE** references, even when taken in combination, do not teach or suggest all limitations of Applicant's claim 12, and that claim 12 is patentable over the cited references.

Additionally, Applicant's claim 12 additionally requires, among other things, that the tubular electrode connected to the housing, concentrically surrounding the first phase conductor, be disposed radially inside the first flange, and projecting beyond the first flange. First, as stated above, neither **FURUTA**, nor **ROKUNOHE**, teach or suggest a tubular electrode concentrically surrounding the first phase conductor. As such, neither **FURUTA**, nor **ROKUNOHE**, can possible teach or suggest that such a tubular electrode is disposed radially inside the first flange, and projects beyond the first flange. However, even if it could somehow be said, arguendo, that **ROKUNOHE** did disclose a tubular electrode (which Applicant respectfully disputes), such a teaching would not be combinable with the **FURUTA** reference to teach Applicant's invention of claim 12.

More particularly, the Office Action points to Fig. 12 of **FURUTA** in rejecting Applicant's claim 12. Fig. 12 of **FURUTA** is additionally being provided herebelow, for convenience.

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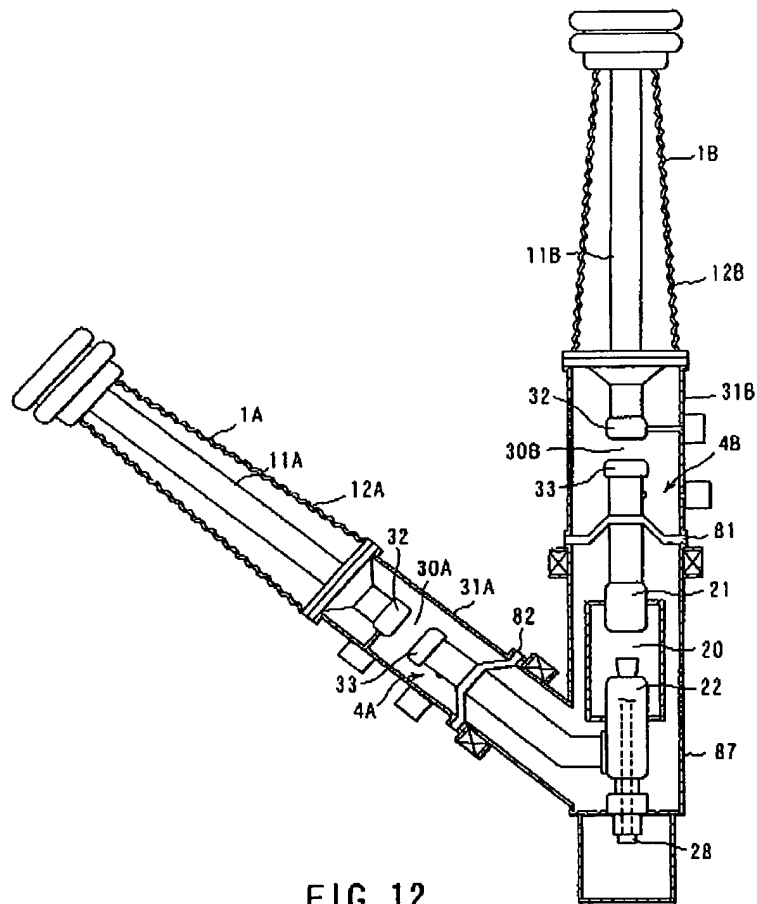


FIG. 12

**FURUTA** discloses a housing 31B, which is closed at its ends by insulators in the first flange (at the top of the housing 31B of **FURUTA**) and a second flange (81 of Fig. 12 of **FURUTA**).

Col. 13 of **FURUTA**, lines 1 - 6, state:

FIG. 12 shows the construction of a hybrid type gas insulation switch gear apparatus according to a fifth embodiment of the present invention. **The members of the apparatus common with FIGS. 10 and 12 are denoted by the same reference numerals so as to avoid the overlapping description.** [emphasis added by Applicant]

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As such, common parts in Figs. 10 and 12 of **FURUTA** are denoted by the same reference numerals. With regard to Fig. 10 of **FURUTA**, col. 12 of **FURUTA**, lines 35 - 44, state:

In the hybrid type gas insulation switch gear apparatus according to the fourth embodiment of the present invention, which is shown in FIG. 10, the circuit breaker 20 is arranged horizontal so as to arrange the circuit breaker in a lateral type enclosure 85. Two branched portions 86A and 86B differing from each other in the angle relative to the axis of the enclosure 85 are mounted to the upper surface of the enclosure 85 so as to assume a substantially V-shaped configuration. The gas space of the branched portions 86A, 86B is partitioned by the insulating spacers 80, 81. [emphasis added by Applicant]

Thus, item 81 of Fig. 12 of **FURUTA** is an insulating spacer. Additionally, Fig. 10 of **FURUTA** shows an upper insulator 60B, attached to the fixed electrode 32 (Figs. 10 and 12 of **FURUTA**). Note that, in connection with the disconnecting switches 30A and 30B of **FURUTA**, the reference numerals 32, 33, 30B, 81, 4B are used identically in Figs. 10 and 12 of **FURUTA**. Additionally, col. 12 of **FURUTA**, lines 45-49, state:

The disconnecting switches 30A, 30B are housed, respectively, in the spaces of the branched portions 86A, 86B to form the disconnecting switches 30A, 30B, which are partitioned from the enclosure and are electrically connected to both sides of the circuit breaker 20. [emphasis added by Applicant]

Thus, **FURUTA** discloses that the disconnecting switch 30A, 30B "are partitioned" from the enclosure, and that the branched portions 86A, 86B of **FURUTA** "are partitioned" by the



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insulating spacers 80, 81. See also, for example, col. 13 of **FURUTA**, lines 7 - 15.

Additionally, col. 12 of **FURUTA**, lines 55 - 58, state:

The insulating enclosures 12A, 12B are mounted to the branched portions 86A, 86B acting as the first and second enclosures via the conductors 11A, 11B of the bushings 1A, 1B **and the insulating spacers 60A, 60B** serving to support and connect the disconnecting switches 30A, 30B. [emphasis added by Applicant]

Thus, the alleged "first flange" of Fig. 12 of **FURUTA** is an "insulating spacer", as is the alleged "second flange" 81 of Fig. 12 of **FURUTA**. That the alleged "first flange" **FURUTA** must include an insulator (i.e., the insulating spacer 60B) is additionally supported by the fact that the housing 31B of **FURUTA** must be interpreted as an electrically conductive housing. Arranged in the interior of the housing 31B of **FURUTA** are the first and second electrical phase conductors. If the housing 31B of Fig. 12 of **FURUTA** were not bounded by the insulating spacers 81 of **FURUTA** and the spacer attached between the electrode 32 and the alleged "first flange" of **FURUTA**, the electrically conductive housing 31B of **FURUTA** would short-circuit the switching contacts 32, 33 of **FURUTA** and, thus, would render inoperative the entire switching device shown in Fig. 12 of **FURUTA**.

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Because the housing 31B of **FURUTA** must be bounded and "partitioned" at each end by an insulating spacer, it would be impossible for the first and second flanges of **FURUTA**, which are closed by the corresponding insulators, to be interspersed at the inner side by an electrode. Put quite simply, the upper insulating spacer of **FURUTA** is arranged as a barrier that would not allow an electrode to intersperse the flange.

In order to achieve a modification of **FURUTA** to cover Applicant's invention of claim 12, the complete insulated mount of the phase conductors in the interior of the electrically conductive housing 31B of **FURUTA** would have to be changed. Thus, the teachings of **FURUTA** would be destroyed were **FURUTA** to be modified to include a tubular electrode connected to the housing, **concentrically surrounding the first phase conductor, disposed radially inside the first flange, and projecting beyond the first flange**, as required by Applicant's claim 12. As such, **FURUTA** cannot be modified, as suggested in the Office Action, to include a tubular electrode **disposed radially inside the first flange, and projecting beyond the first flange**, because **FURUTA** discloses that the first flange is completely closed, and to modify that would impermissibly destroy the teachings of **FURUTA**.

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Further, even if it could somehow be said, arguendo, that **ROKUNOHE** did disclose a tubular electrode (which Applicant respectfully disputes), and if a combination of **FURUTA** and such a tubular electrode did not destroy the specific teachings of **FURUTA** (which it does), Applicant's invention of claim 12 would still not be rendered obvious by the combination of **FURUTA** and **ROKUNOHE** reference to teach Applicant's invention. More particularly, placing one of the bushings 6a, 6b, 6c of Fig. 16 of **ROKUNOHE** onto the electrically conductive housing 31B of Fig. 12 of **FURUTA**, as alleged in the Office Action, would provide a surrounding electrode present within the bushing, but outside of the housing 31b of **FURUTA**. For example, such a bushing of **ROKUNOHE**, at the top end of the housing 31b of **FURUTA**, would place the alleged tubular electrode outside of the insulator taught in **FURUTA**, and exclusively within the bushings 6a, 6b, 6c of **ROKUNOHE**, so that the first flange of the electrically conductive housing 31B of **FURUTA** is not interspersed with the alleged tubular electrode of **ROKUNOHE**.

Applicant is providing herebelow, a drawing generated by Applicant showing the switch disconnecter of **FURUTA**, having the bushing 6c of **ROKUNOHE** replacing a bushing of **FURUTA**.

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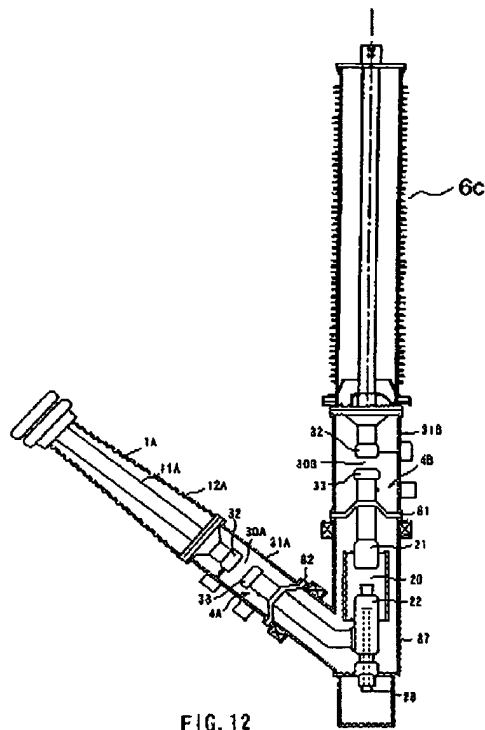


FIG. 12

Note that, if the undescribed black line of Fig. 16 of **ROKUNOHE** is a "tubular electrode", as claimed by Applicant, **ROKUNOHE** fails to teach or suggest whether an edge of that alleged "tubular electrode" is disposed radially inside the first flange, and projects beyond the first flange. Rather, as can be seen from Fig. 16 of **ROKUNOHE**, the undescribed black lines, allegedly analogous to Applicant's tubular electrode of claim 12, are bent at their ends in the bushings (6a, 6b, 6c of Fig. 16 of **ROKUNOHE**) and appear to be connected within the bushings 6a, 6b, 6c of Fig. 16 of **ROKUNOHE**, above the flange of **ROKUNOHE**. As such, as far as can be determined from Fig. 16 of **ROKUNOHE**, the alleged "tubular electrodes", do not

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connect with the housing and do not project through a first flange, as required by Applicant's claim 12.

For the foregoing reasons, among others, Applicant's claim 12 is believed to be patentable over the **FURUTA** and **ROKUNOHE** references, whether taken alone, or in combination.

Additionally, claim 19 of the instant application was rejected on page 4 of the Office Action, which stated, in part:

Regarding claim 19, Furuta discloses a grounding switch [4b] interior of the housing for grounding the phase conductor; an insulating casing [12B]; a portion of the housing above the second flange is taken as a stub and the modified device of Furuta will have a toroidal transformer disposed around the stub, also the stub area on the housing will have a common gas area.

It is believed that the statement in the Office Action relating to the "modified device of Furuta" relates to the assertion made in the Office Action with regard to claims 13 and 14, which alleged:

Furuta also discloses a current transformer below the second flange [120]. The second [sic] does have an outside which can be a holding device for the transformer. It would have been obvious to reposition the transformer above the second flange level, in order to measure the current close to the gap.

As such, it is believed that the Office Action is alleging that "[i]t would have been obvious to reposition the

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transformer" of **FURUTA** "above the second flange level, in order to measure the current close to the gap".

Applicant respectfully disagrees.

More particularly, Applicant's claim 19 recites, among other limitations:

an electrically insulating casing flange-connected to said housing as an outdoor bushing;

a first phase conductor passing through said casing and having one end connected to said switching contact; and

said housing and said casing surrounding a common gas area, said common gas area extending into said tubular connecting stub. [emphasis added by Applicant]

As such, Applicant's claim 19 requires, among other limitations, an electrically conductive housing including a tubular connecting stub and an electrically insulating casing connected to the housing as an outdoor bushing, the housing and casing surrounding a common gas area that extends into the tubular connecting stub. The **FURUTA** reference does not teach or suggest, among other limitations of Applicant's claims, Applicant's particularly claimed device including an electrically conductive housing including a tubular connecting stub and an electrically insulating casing connected to the housing as an outdoor bushing, the housing and casing

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surrounding a common gas area that extends into the tubular connecting stub.

More particularly, as stated above, **FURUTA** discloses a housing 31B, which is closed at its ends by insulators in the first flange (at the top of the housing 31B of **FURUTA**) and a second flange (81 of Fig. 12 of **FURUTA**).

As such, the housing and outdoor bushing (i.e., casing) of **FURUTA** can never have a "common gas area", as required by Applicant's claim 19. The "partitioning" (i.e., separating) of the gas in the bushing from the gas in the housing in **FURUTA** is done for a very distinct purpose. Col. 12 of **FURUTA**, lines 20 - 27, state:

To be more specific, in the apparatus according to the third embodiment of the present invention, **the gas within the circuit breaker 20 and the two disconnecting switches 30A, 30B is partitioned**, with the result that, even if an accident has taken place in any one of the disconnecting switches 30A and 30B, it is possible to avoid the power failure of the entire apparatus by stopping the single bus line.  
[emphasis added by Applicant]

See also, for example, col. 13 of **FURUTA**, lines 11 - 16. Because the housing 31B of **FURUTA** must be bounded and "partitioned" at each end by an insulating spacer, the housing and bushing do not share a common gas area. As such, among other limitations of Applicant's claims, the housing and

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outdoor bushing (i.e., casing) of **FURUTA** do not have a "common gas area", as required by Applicant's claim 19. To modify **FURUTA** to do so would destroy the teachings of that reference.

Applicant additionally reiterates and incorporates herein, by reference, the arguments made in the response to the previous Office Action for the patentability of claim 19 over **FURUTA**.

For the foregoing reasons, among others, Applicant's claim 19 is believed to be patentable over **FURUTA**, alone, or in any permissible combination with **ROKUNOHE**.

It is accordingly believed that none of the references, whether taken alone or in any combination, teach or suggest the features of claims 12 and 19. Claims 12 and 19 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claims 12 or 19.

In view of the foregoing, reconsideration and allowance of claims 12 - 21 and 23 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a



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telephone call so that, if possible, patentable language can  
be worked out.

If an extension of time for this paper is required, petition  
for extension is herewith made.

Please charge any fees that might be due with respect to  
Sections 1.16 and 1.17 to the Deposit Account of Lerner  
Greenberg Stemer LLP, No. 12-1099.

Respectfully submitted,

  
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